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ARTICLE

Europe's twenty-first century challenge: climate change, migration and security

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Abstract Most of the refugees arriving in Europe are fleeing civil war and unrest. However, it is important to recognise how the second-order effects of climate change—which can undermine agriculture and increase competition for water and food resources—are contributing to instability and decisions to migrate. While migratory decisions are complex, climate change is an increasingly important contributing factor: it is threatening humanity's shared interests and collective security in many parts of the world. The cumulative effects of these trends have serious implications for the stability of nations that lack sufficient resources, good governance and the resilience to respond. While there is a need for greater understanding of the detailed causes of

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migration, as well as the associated economic and political instability, a growing body of evidence links climate change, migration and conflict in troubling ways.

Keywords Climate change | Migration | North Africa | Mediterranean | Security | Europe

Introduction

The current migrant crisis in the Mediterranean was sparked by civil war and unrest in Syria, Libya and other places. But its roots go deeper: it is symptomatic of a process of dislocation reshaping the Levant, the Sahel and Sub-Saharan Africa. Climate change is affecting basic environmental conditions such as rainfall patterns and temperatures. It is contributing to more frequent occurrences of floods, droughts and other natural disasters. Over the long term, these changing conditions are likely to undermine rural livelihoods such as farming, herding and fishing. In effect, these factors squeeze the margins of rural life, and this rural dislocation shapes migratory decisions. Of course, migratory decisions are complex. Climate change is not the sole or even the primary cause, but it is an important contributing factor and should not be ignored. Even when migrants list economic reasons for their migration—agricultural dislocation or price disruption, for example—the influence of climate change often lies beneath the surface. In summary, the second-order effects of climate change—less predictable or reduced agricultural production and greater competition for water and food resources—can and often do contribute to instability and to higher numbers of migrants.

These trends will add to the pressures facing local and national governments in the decades to come. In light of these challenges, advanced and developing nations must revise traditional concepts of security and focus on supporting basic governance and building the resilience of vulnerable communities. European and international leaders will have to deal with climate-driven crises and demographic pressures by mobilising resources at levels generally reserved for traditional competition between nation-states. Currently, the international community is not prepared. Organisations such as the US Agency for International Development, the World Bank, the Red Cross and the World Health Organization do not have the financial capacity, manpower or global presence to deal with the effects of these challenging developments.

A pressing challenge for Europe

Recent intelligence reports and simulations—including some conducted by the US Department of Defense—conclude that vulnerable regions such as Sub-Saharan Africa, the Middle East, South Asia and South-East Asia will face food shortages or price spikes, water crises and massive flooding driven by climate change in the coming decades. The destabilising effects of these events will impact the EU and its foreign and economic interests. These insights lend urgency to attempts to rebalance the traditional

tools of diplomacy, development and defence to more effectively build basic human security. Thus far, Europe's responses have been stymied by a lack of resources, a narrow bilateral focus and an absence of strategic coordination at the international level. Given the current influx of refugees, time is running out. A collective approach is essential, as responses will require investments in economic development, infrastructure, adaptation, and preventative efforts to bolster basic human and livelihood resilience that are beyond the capabilities of any single state.

However, the institutional tools and funding structures for such an approach have not yet been developed—and current policies within some of the EU member states are dangerously counterproductive (see Kiai et al. 2015; Jacobson 2015). The EU and its partners should refocus their engagement in order to address the slow-moving trends that are undermining basic human security. They should transfer greater authority and funding to agencies in charge of delivering foreign assistance and building resilience to climate change. Finally, they should revamp institutions to build interdisciplinary country teams able to address a wide array of overlapping factors linked to climate change, migration and instability.

The problems next door

The problems are developing next door, in north-west Africa (Werz and Conley 2012), where underlying trends of climate and demography have squeezed the margins of life at the family and community level, contributed to decisions to migrate, heightened conflicts over basic resources, and threatened to undermine state structures and regional stability. These developments may have exacerbated violence and contributed to the resulting migration—they dominated the policy debate in 2015.

According to the UN, up to 250 million people in Africa are projected to suffer from water and food insecurity this century, and three-quarters of rain-fed arable land in the Sahel will be greatly affected by climate change (Kandji et al. 2006; UN 2014). Rising temperatures, drought, desertification, erosion, flooding and sea-level rise all threaten different areas along the axis from Nigeria to Morocco (see Werz and Conley 2012; Di Bartolomeo et al. 2011). Niger and northern Nigeria have faced more frequent droughts and flooding over the last 30 years, along with temperature increases of between 0.5 °C and 1 °C (Kandji et al. 2006). The Niger River has seen diminishing flows, a trend which is an existential concern for those reliant on its waters. If current water consumption trends continue, withdrawals from the Niger basin will increase sixfold by 2025, with profound implications for the region. Lake Chad, a source of life for 25 million people, is drying up, and it is now down to one-twentieth of its size in 1960 (Niasse 2005). The northern parts of Algeria and Morocco, home to the population centres and most of the agriculture in both countries, may see reductions in rainfall of 10 %–20 % by 2025 (Alexander 2010). Finally, Lagos in the south and many parts of Algeria's and Morocco's northern coasts are under threat from rising sea levels and saltwater intrusion (Folami 2010; O'Neill 2009; Brown et al. 2011).

These are not the abstract complaints of climate scientists but represent a profoundly disruptive trend in a region dependent on agriculture and other rural livelihoods such as herding and fishing, and lacking quality infrastructure and integrated markets to relieve localised disruptions. When faced with deteriorating conditions, humans have long turned to migration as a basic adaptive mechanism. And, of course, these trends must be combined with the rapid population growth projected to occur throughout the Sahel and West Africa, increasing the strain placed on the countries along this migratory route. Niger has the world's second-highest fertility rate and a median age of just 15 years, and its population is expected to quadruple in the next century. Nigeria's population is expected to double by 2040. Population growth increases the strain on already scarce natural resources such as water, land and food and further contributes to migratory decisions (UN Population Division 2010).

All these trends affect Europe: North Africa and Sub-Saharan Africa are traditionally tied together by long-standing and well-established migratory routes—routes which often continue on to Europe. As early as 2011, research indicated that some 65,000 migrants were passing through Agadez, Niger on their way north to Algeria, Morocco and Europe each year. As climate change takes its toll on farming, herding and fishing—undermining livelihoods and contributing to decisions to migrate—these migratory movements could increase.

Any effort to address the migrant tragedy playing out in the Mediterranean must understand and address these deeper root causes. The UN has consistently tried to draw greater attention to the issue, and in 2008 the EU's foreign policy chief warned that large numbers of climate migrants from Africa were headed for Europe (Martin 2008). Though the alarm has been raised, policymakers are still tending to focus on the symptoms rather than the causes.

Europe finds itself in a particularly challenging political position. Rising migration from Africa—much of it illegal—has long been a contentious domestic issue in the EU, which has responded by partnering with the African Union to enhance safety at sea and formalise migration routes. The focus on better migratory coordination with the African Union was intended to reduce illegal immigration while creating a strong system of integration and remittances. Yet these two regional organisations have vastly different capabilities. Neither has made any serious concerted effort to cooperatively tackle the root causes of migration, such as climate change, rural disruption and conflict.

As important as the current work to regularise migration is, it will not resolve the migratory pressures on Europe. Javier Solana, the EU's former high representative for Common Foreign and Security Policy, pointed out that climate change threatens the entire multilateral system of the international community. He argued almost a decade ago, that 'the effects of climate change would promote a policy of resentments between all those who are responsible for climate change and those who are its worst victims' (Martin 2008; see Werz 2008). The warning was prescient: climate migration could convert the Mediterranean into a flashpoint between Europe and Africa.

EU policy: a limited response

Despite the difficulties of aligning the interests of member states into a broader regional approach, the EU has taken steps to address the nexus of climate, migration and security in the Mediterranean basin. One of the measures is the regional focus of the European Investment Bank (EIB) on the Mediterranean neighbourhood, with the intention of integrating EIB services into the region. A prime example is the Facility for Euro-Mediterranean Investment and Partnership (see EIB n.d.), which provides financing and technical assistance to projects promoting sustainable economic growth along the Mediterranean littoral.

In the past decade, this financing has been accompanied by a promising process of institutional reform within the EU and the partial integration of environmental and migration concerns with development assistance. The EIB's 2009 establishment of the Marseille Center for Mediterranean Integration offers an example of these nascent changes.

The realisation of the interdependence of the countries of the Mediterranean littoral—and their shared environmental concerns—constitutes an important step which, accompanied by projects to promote sustainable development and increase employment in migrants' countries of origin, represents the opening attempt to tackle the problems posed by the nexus of climate change, migration and security. But there is undoubtedly a long way to go in integrating diverse institutional bodies, working with other regional institutions, and expanding the scope and magnitude of direct assistance to help other regions and appropriately reflect the magnitude of the challenge.

The need for research, coordination and funding

Worldwide, the academic community continues to explore causal connections between climate change, environmental changes and migratory patterns. There is ample anecdotal evidence of the correlation between climate impacts and migration, but the exact causation of decisions to migrate is very difficult to definitively establish. Thus far no 'smoking gun' has been found that could serve to mobilise an appropriate policy response. However, irrespective of exact causality, the picture emerging in north-west Africa and several other regions demands attention. A prudent strategic assessment calls for meaningful engagement with these trends now, rather than later. Such efforts would allow the academic community, international organisations and governments to develop ways to address underlying contributors to instability—to pioneer a fire prevention approach rather than calling in the default firefighters, the US Department of Defense.

In the face of these developments, governments in Europe need to design policies and projects that are cost-effective, resilient to climate change and able to meet the rising demand for resources. Today, security and prosperity is less about force and more about the ability to compel or organise collective action to solve transnational problems.

Europe, in concert with the US, should broaden its conception of national security to encompass the underlying trends which threaten the stability of the rules-based international order, which is the foundation of our own security and prosperity.

Such a joint approach could renew the transatlantic partnership at a strategic level. The 2010 Quadrennial Diplomacy and Development Review initiated by Secretary of State Clinton inaugurated this debate in the US. For the first time, the State Department engaged in a strategic review to elevate civilian power and focus on human security and livelihood protection. But when it comes to real legal authority and, most importantly, the allocation of funds and manpower, the US is still massively over-invested in traditional hard security capabilities and under-invested in the tools designed to build basic human security and prevent conflict.

Of course, there are instances, such as in Mali or Somalia, where the situation has deteriorated too far to take preventative action. Sometimes it is simply too dangerous to try to address the root causes of insecurity. In these places it can make sense for the international community, in conjunction with local partners, to use military force to protect local populations and provide the conditions needed to build basic human security. But the international community, led by Europe and the US, should be making a much bigger effort to prevent other places from descending into such conditions. Doing so means larger investments of people, time and money.

On-the-ground programmes to build such resilience include infrastructure investments such as irrigation systems, flood walls and mangrove protection, or housing for migrants—such programmes can help contribute to long-term stability in rural areas threatened by the effects of climate change. Transportation infrastructure can help bring crops to market and allow emergency supplies to reach disrupted areas. Integrated markets allow for more gradual price adjustments and fewer shortages.

Simple technological and conservation fixes can also have disproportionate effects in bolstering human security and addressing the factors underpinning conflict and instability. In developing countries wood fuel provides about one-third of the total energy requirement. This proportion is higher in poor rural areas, such as parts of Africa, where as much as 70 % of energy is derived from biofuels (International Energy Agency 2014). In this context, providing inexpensive cooking stoves and solar lamps to fill this need can reduce deforestation, helping to prevent erosion and mitigate climate change while offering tangible evidence that governments are able to respond to fundamental challenges to human security, thus contributing to stability. Disaster preparedness steps, such as pre-positioning stocks and investing in emergency airlift and transport capabilities, can help to allay the political fallout of environmental disasters. By getting ahead of these trends with preventative action, funders such as the US and other developed countries can reduce the frequency and severity of more costly disaster-response or conflict-stabilisation efforts after the fact.

Europe must play a central role in this effort and engage emerging powers in the process. After all, the BRIC[1] countries and emerging players such as South Africa collectively doubled humanitarian assistance from 2005 to 2008 and will continue to be important players despite their economic troubles. It is time to encourage this trend and seek to cooperate. Creating a successful coalition to address climate impacts will also require the participation of the private sector. US private philanthropy, remittances and private capital flows continue to exceed government assistance (Hudson Institute 2013). Also, private companies are often better than governments at tasks such as creating and securing supply chains or developing drought-resistant crops.

The infrastructure and commitment to addressing the root causes of conflict and instability such as climate change, rural disruption and migration need to match the scale of the threats that these factors underpin and perpetuate. In this regard, the most important obstacle to shifting funding and authority within the government to deal with underlying causes is political. In Europe, and even more so in the US, it is difficult to address the imbalance of funding and authority between military and non-military activities. Foreign assistance lacks a domestic political constituency.

Lastly, academic research has yet to fully explore the direct causal connections between climate change, migration and human conflict. But the expected impacts of climate change overlap with current areas of insecurity and existing migratory routes—the cumulative effects are therefore also important to consider. More information on the direct impacts of climate change and the secondary and tertiary effects, such as migration, staple prices and rural conflict or disruption is needed. Efforts such as the US Agency for International Development's Alert Lists, which analyse fragility and future climate trends, are a good start, but research on the topic requires more data to aid forecasting and improve understanding. In the era of big data, it is astonishing that policymakers were caught off guard by the spike in staple prices—caused in part by a remarkable series of abnormal weather patterns (see Werrell and Femia 2013)—which prompted the global food crisis of 2011.

Conclusion

For both selfish and idealistic reasons, Europe should lead the drive for sustainable security. As the global emergency responder, the steps outlined above are cost-effective ways to reduce the burden of maintaining global stability. And as a beneficiary of the post-war liberal international order, the EU has an obligation to respond to trends that threaten to undermine the stability of that order. Doing so will require the Union, in coordination with the US and other partners, to overcome a long list of challenges. However, it is past time for national governments and global institutions to grapple with a new century of complex crisis scenarios.

[1] Brazil, Russia, India and China.

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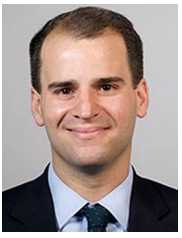

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